



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0793; Directorate Identifier 2012-NM-138-AD; Amendment 39-17727; AD 2014-01-04]**

**RIN 2120-AA64**

**Airworthiness Directives; BAE SYSTEMS (OPERATIONS) LIMITED Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. This AD was prompted by reports of excess solder deposited during overhaul on the frangible plug of a fire extinguisher, which prevented the release of the extinguishant. This AD requires a one-time inspection of certain engine and auxiliary power unit (APU) fire extinguishers to determine if the fire extinguishers are affected by excessive solder and corrective actions if necessary. We are issuing this AD to prevent the failure of a fire extinguisher to discharge, which reduces the ability of the fire protection system to extinguish fires in the engine or APU fire zones, possibly resulting in damage to the airplane and injury to the passengers.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at

<http://www.regulations.gov/#!docketDetail;D=FAA-2013-0793> or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For BAE SYSTEMS (OPERATIONS) LIMITED service information identified in this AD, contact BAE SYSTEMS (OPERATIONS) LIMITED, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email

[RApublications@baesystems.com](mailto:RApublications@baesystems.com); Internet

<http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. For Kidde Graviner service information identified in this AD, contact Kidde Graviner Limited, Mathisen Way, Colnbrook, Slough, Berkshire, SL3 0HB, United Kingdom; telephone +44 (0) 1753 683245; fax +44 (0) 1753 685040. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

**FOR FURTHER INFORMATION CONTACT:** Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146 series airplanes and Model Avro 146-RJ series airplanes. The NPRM published in the Federal Register on September 25, 2013 (78 FR 58960). The NPRM was prompted by reports of excess solder deposited during overhaul on the frangible plug of a fire extinguisher, which prevented the release of the extinguishant. The NPRM proposed to require a one-time inspection of certain engine and auxiliary power unit (APU) fire extinguishers to determine if the fire extinguishers are affected by excessive solder and corrective actions if necessary. We are issuing this AD to prevent the failure of a fire extinguisher to discharge, which reduces the ability of the fire protection system to extinguish fires in the engine or APU fire zones, possibly resulting in damage to the airplane and injury to the passengers.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2012-0126R1, dated September 10, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

A fire handle on a BAe 146 aeroplane was operated on the ground as a precautionary measure after the throttle cable on the affected engine failed, due to corrosion. The extinguisher failed to discharge.

Investigation results revealed that excess solder, which had been deposited during overhaul on the frangible plug of the extinguisher, prevented the release of the extinguishant. Prompted by this report, Kidde Graviner, the fire extinguisher manufacturer, identified four further extinguishers of similar design that had the same issue.

This condition, if not detected and corrected, could result in the failure of a fire bottle to discharge, which reduces the ability of the fire protection system to extinguish fires in the engine or Auxiliary Power Unit (APU) fire zones, possibly resulting in damage to the aeroplane and injury to the occupants.

For the reasons described above, EASA issued AD 2012-0126 to require a one-time inspection of the affected Part Number (P/N) 57333 engine and APU fire extinguishers. In addition, this [EASA] AD prohibited installation of a fire extinguisher, unless it has passed the inspection as required by [EASA] AD 2012-0126.

Revision 1 of this [EASA] AD is issued to clarify that new extinguishers P/N 57333 may be fitted with no additional inspection required by this [EASA] AD.

Required actions include installing a new unit or overhauling the unit if any solder is found during the inspection.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0793-0002>.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (78 FR 58960, September 25, 2013) or on the determination of the cost to the public.

### **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 58960, September 25, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 58960, September 25, 2013).

### **Costs of Compliance**

We estimate that this AD affects 1 airplane of U.S. registry.

We also estimate that it will take about 1 work-hour per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$85, or \$85 per product.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0793>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**2014-01-04 BAE SYSTEMS (OPERATIONS) LIMITED:** Amendment 39-17727.

Docket No. FAA-2013-0793; Directorate Identifier 2012-NM-138-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to BAE SYSTEMS (OPERATIONS) LIMITED Model BAe 146-100A, -200A, and -300A airplanes; and Model Avro 146-RJ70A, 146-RJ85A, and 146-RJ100A airplanes; certificated in any category; all models, all serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 26, Fire protection.

**(e) Reason**

This AD was prompted by reports of excess solder deposited during overhaul on the frangible plug of the extinguisher, which prevented the release of the extinguishant. We are issuing this AD to prevent the failure of a fire extinguisher to discharge, which reduces the ability of the fire protection system to extinguish fires in the engine or auxiliary power unit (APU) fire zones, possibly resulting in damage to the airplane and injury to the passengers.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.



**(g) Inspection and Corrective Action**

For airplanes equipped with fire extinguishers manufactured by Kidde Graviner Limited having part number (P/N) 57333 (all dash numbers): Within 12 months after the effective date of this AD, do an x-ray inspection to determine if there is solder between the operating head and container of the fire extinguishers in the engine and APU, in accordance with the Accomplishment Instructions of BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB. 26-078, dated September 21, 2011; or Kidde Graviner Service Bulletin 26-080, Revision 1, dated July 27, 2011; as applicable.

(1) If any solder is found, before further flight, do the action specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD, in accordance with the Accomplishment Instructions of Kidde Graviner Service Bulletin 26-080, Revision 1, dated July 27, 2011.

(i) Overhaul the fire extinguisher and install. An overhaul includes the replacement of the operating head. Replacement of the pressure relief plug assembly only is not considered an overhaul.

(ii) Install a new fire extinguisher.

(2) If no solder is found, no further action is required by this paragraph.

**(h) Parts Installation Limitation**

As of the effective date of this AD, no person may install a Kidde Graviner Limited fire extinguisher having P/N 57333 (any dash number), on any airplane, unless the fire extinguisher is new, or it has been determined that there is no solder between the operating head and container of the fire extinguishers as required by paragraph (g) of this

AD, or has been overhauled in accordance with the Accomplishment Instructions of Kidde Gravinier Service Bulletin 26-080, Revision 1, dated July 27, 2011.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Todd Thompson, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1175; fax 425-227-1149. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@faa.gov). Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(j) Related Information**

Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency (EASA) Airworthiness Directive 2012-0126R1, dated September 10, 2012, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0793-0002>.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) BAE SYSTEMS (Operations) Limited Inspection Service Bulletin ISB. 26-078, dated September 21, 2011.

(ii) Kidde Gravinier Limited Service Bulletin 26-080, Revision 1, dated July 27, 2011.

(3) For BAE SYSTEMS (OPERATIONS) LIMITED service information identified in this AD, contact BAE SYSTEMS (OPERATIONS) LIMITED, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email [RAPublications@baesystems.com](mailto:RAPublications@baesystems.com); Internet <http://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

(4) For Kidde Graviner service information identified in this AD, contact Kidde Graviner Limited, Mathisen Way, Colnbrook, Slough, Berkshire, SL3 0HB, United Kingdom; telephone +44 (0) 1753 683245; fax +44 (0) 1753 685040.

(5) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 7, 2014.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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